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April 17, 2006

U.S. Environmental Protection Agency
(Air Docket No. EPA-HQ-OAR-2001-0017)
1200 Pennsylvania Avenue, NW
Mail Code: 6102T
Washington, DC 20460

Re: Proposed Rule -- National Ambient Air Quality Standards for Particulate Matter [71 FR 2620]

Dear Sir or Madam:

On January 17, 2006, the United States Environmental Protection Agency (EPA) published a proposed revision to the National Ambient Air Quality Standards (NAAQS) for Particulate Matter [71 FR 2620]. The South Carolina Department of Health and Environmental Control (SC DHEC) offers the following comments on the U.S. Environmental Protection Agency's (EPA's) proposed rule.

In the Clean Air Act, Congress recognized that state and local air agencies are primarily responsible for preventing and controlling air pollution[1]. As part of that responsibility, we recognize that regular review and revision of the National Ambient Air Quality Standards are an important (and required) element of public health protection. The distillation of the latest science and the knowledge gained since the last review into standards that protect, reference methods that measure, and indicators that summarize is a monumental task, but the investigation, implementation, application and reporting of the standards and rules is the responsibility of the states. The observations, comments and suggestions of the states, programs and individuals that daily measure the progress and work with communities, facilities and governments to improve air quality must be given serious consideration. The final rules and regulations establish the foundation but should support, and not impede, our ability to do more, better or what is appropriate for our State.

The expression of the rule, from the broad concepts to, on occasion, the use of a few words, can have a significant impact on the ability of our State air program 'to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare...'[2] Please accept and consider these comments, both the broad and the focused, as opportunities to review the specific items commented upon and ultimately improve the applicability of the rule and our ability to meet our responsibilities to improve air quality and protect public health.

[1] Section 101(a)(3).
[2] Section 101(b)(1).

[71 FR 2698 §50.16 (d)]
SC DHEC has submitted documentation to the docket and EPA Region IV in reference to the inappropriateness of the use of the monitor referenced in the administrative record (Rosendahl, 2005) to represent the Columbia, SC urban area. The inclusion of the monitor suggests that further confirmation of the nature of the sites, and the appropriate bounds for the area where the standard will be retained should be reviewed before finalization of the rule.

SC DHEC suggests that EPA consider areas appropriate to the spatial scale and representativeness of the violating monitor be considered in the definition of the area for which the PM_{10} NAAQS is maintained rather than defaulting to the urban area.

[71 FR 2698 §50.13 (a)(2)(ii)]
We believe it is inappropriate with the current state of understanding of $PM_{10-2.5}$ concentrations, distribution and composition to prematurely exempt any source categories from control. The blanket exemptions for rural windblown dust, agricultural, mining, and "other similar" sources[3] may be found to be appropriate when additional data is available, but the exemption by it's reflection in monitoring requirements (Part 58 Appendix E) will limit the ability of SC DHEC and EPA, to gather the mass indicator and $PM_{10-2.5}$ composition data that will be needed to support subsequent reviews.

Without collocated and concurrent collection of samples for analysis and consistent methods for analysis and interpretation, the standard as proposed may be unworkable in practice.

SC DHEC asks that EPA eliminate the exemptions for agriculture, mining and rural windblown dust, establish the methods appropriate for collection, analysis and interpretation of $PM_{10-2.5}$ particulate composition and provide for the resources necessary to collect sufficient data to support health studies, the next standard review and greater understanding of the health and welfare impact of $PM_{10-2.5}$.

[71 FR 2698 §50.13]
The numbering of subsections starting at (a)(2) appears to be in error and inconsistent with the other sections of the proposed and existing rule.

[71 FR 2700 Appendix N 2.0 (b)]
Spatial Averaging is acknowledged in the current rule as 'directly related to the epidemiological basis for the $PM_{2.5}$ NAAQS'[4] and is the current default method for calculation for comparison to the annual standard.[5] The proposed Ambient Monitoring Revisions also acknowledge the basis[6].

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[3] [71 FR 2698-2699] "The standard for $PM_{10-2.5}$ includes any ambient mix of $PM_{10-2.5}$ that is dominated by resuspended dust from high density traffic on paved roads and PM generated by industrial sources and construction sources, and excludes any ambient mix of $PM_{10-2.5}$ that is dominated by rural windblown dust and soils and PM generated by agricultural and mining sources. Agricultural sources, mining sources, and other similar sources of crustal material shall not be subject to control in meeting this standard".

[4] [PT 58 App. D, 2.8.1.6.1] 'This averaging approach as specified in 40 CFR part 50, appendix N, is directly related to the epidemiological studies used as the basis for the $PM_{2.5}$ NAAQS.'

[5] [PT 50 App. N, 2.1(a)] 'The annual $PM_{2.5}$ standard is met when the 3-year average of the spatially averaged annual means is less than ...'

[6] [FR 2802 App D 4.7.5]

The proposed requirements listed in Appendix N, 2.0 (b)(1-4) as necessary to qualify for spatial averaging are excessively restrictive and due to section (4) virtually requiring speciation sampling at all candidate sites are thus unreasonably burdensome for any monitoring organization. Any sampler meeting the criteria would likely be considered duplicative and a candidate for elimination. There is no need for the option to average if spatial variability is not allowed within the Community Monitoring Zone. If it is EPA's intent to eliminate Spatial Averaging as an option for comparison to the $PM_{2.5}$ annual standard, then the related references, requirements and criteria should be removed from the rule.

[71 FR 2701 Appendix N 3.0 (d)(2)]
There are 2 elements of this section that need to be clarified:

The first sentence states: 'Data for the primary monitor shall be augmented as necessary with the data from collocated FRM/FEM[7] monitors.' It is clear that missing or voided data from the primary monitor can be replaced with collocated, equivalent data if it is available, but is the intent of the section for the replacement to be done in all cases or 'as necessary' to allow a sufficient data record to perform the calculations for comparison to the standard?

The last sentence in the section states: 'If more than one valid collocated FRM/FEM value is available, the average of those valid collocated values shall be used as the site value for the day.' The terminology 'site value' is not used in the explanations of the calculations, so it is not clear if those calculations are to be performed using the average of the collocated measurements as the 'daily values', the terminology used in the section 4.4 and 4.5 of the Appendix.

SC DHEC supports the proposed improvement of the calculations for the annual average concentration by either the elimination of the incorrect weighting of the less frequent collocated averaging in the current rule[8] or averaging collocated and concurrent FRM measurements to provide a better estimate of the daily concentration at that location, but the application of the collocated data, both for potential replacement and the calculation of a daily site average needs to be clarified. Regardless of the input to or the final form of, the calculation EPA must have the mechanisms integrated and tested in Air Quality Systems (AQS) to correctly handle the substitution and calculation prior to the need for application of the revised calculations.

Any clarification made to this section should also be duplicated in the proposal for Appendix P: Interpretation of National Ambient Air Quality Standards for $PM_{10-2.5}$ [71 FR 2707 Appendix P 2(e)(2)].

[71 FR 2701 Appendix N 3.0 (d)(2)]
For single site comparisons to the annual $PM_{2.5}$ Standard the term 'high concentrations ' is used as a criteria in this section and in several other places in the proposed rule for a criteria for the use of less than complete data. It is not clear what is considered 'high.' (Higher than normal? Higher than the 24hour annual standard? Within 15 % of the standard?...) and it does not seem that the use of the undefined term is necessary.

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[7] Federal Reference Method / Federal Equivalent Method
[8] 40CFR Pt 50, App.N 2.4(b)

SC DHEC suggests the term could be eliminated in the referenced section and the intent and application remain clear. ('However years with at least 11 samples in each quarter will be considered valid, notwithstanding quarters with less than complete data, if the resulting ... mean is greater than the level of the standard.')

[71 FR 2704 Appendix O 3.3]
'The proposed $PM_{10-2.5}$ FRM uses the same conventional integrated-sample, filter-collection, mass-based gravimetric measurement technology that has been chosen for all previous FRM for the various formal particulate matter indicators.'[9] This section inexplicably allows the use of what would typically be considered an invalid sample from any similar system for the determination of PM_{10C}[10] (but not $PM_{2.5}$) concentration to be used in the calculation of $PM_{10-2.5}$. The proposed FRM samplers have been proven to be reliable and the proposed sample schedule (every day) is likely to provide a reasonable sample set for comparison to the proposed standard. There is no explanation or justification in the preamble for this deviation from standard practice. The exception introduces uncertainty into the measurement and subsequent calculations and unnecessary complication (in the form of flagged data) into the database.

SC DHEC requests that the exception compelling use of data from a PM_C sample period of less than 1,380 minutes be eliminated.

[71 FR 2704 Appendix O 7.2.2]
The samplers proposed as part of the $PM_{10-2.5}$ FRM are already available, operating and providing demonstrably high quality, precise data. There is no physical difference, other than the replacement of the 2.5 micron impactor assembly (WINS) with the appropriate down tube (which many organizations already have) between the current $PM_{2.5}$ FRM and the PM_C half of the $PM_{10-2.5}$ FRM. The operational and procedural requirements are the same. The proposed minimum $PM_{2.5}$ monitoring minimum requirements are likely to make a few $PM_{2.5}$ FRMs available for other use. Requirements for 'like manufacturer, matched design and fabrication'[11] are appropriate, but the requirement for designation of a sampler pair and FRM or of a PM_C that currently is FRM for $PM_{2.5}$ and meets all the specifications in 40 CFR Part 50, Appendix L is an unnecessary expense for monitoring organizations.

SC DHEC requests that that any sampler designated FRM for $PM_{2.5}$ be designated by reference FRM for use in a $PM_{10-2.5}$ sample pair for either $PM_{2.5}$ or PM_C if of like manufacturer, matched design and fabrication, and using a WINS replacement downtube extension meeting the specifications in Figure O-1[12] of the proposal.

SC DHEC supports the following comments provided by State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials (STAPPA/ALAPCO):

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[9] [71 FR 2687 VI A 2]
[10] [2703 FR App O]'1.3 For this reference method, PM10-2.5 concentrations shall be measured as the arithmetic difference between separate but concurrent, collocated measurements of PM_{10} and $PM_{2.5}$, where the PM_{10} measurements are obtained with a specially approved sampler, identified as a "PM_{10C} sampler,"...'
[11] [71 FR 2690 7]
[12] [71 FR 2706]

EPA Needs to Provide Expanded Funding for All PM Monitoring

We are troubled that EPA has ignored any commitment to funding the proposed coarse PM network scheduled for deployment in FY2008. EPA has estimated that the capital costs of this monitoring network could easily exceed $14 million, with annual operating expenses of approximately $13 million. State and local agencies will simply not be able to assume these significant costs.

With respect to $PM_{2.5}$, EPA has made no provision to increase federal funding to address the expanded monitoring requirements for the new standard. In fact, the President's proposed budget for FY2007 slashes fine particulate monitoring by $17 million, which will severely weaken existing monitoring programs and likely result in significant staff cuts throughout the country. Agencies will have serious difficulties rehiring personnel who have been laid off as a result of these budget cuts and who would have been expected to operate these monitoring networks. The proposed FY2007 budget cuts must be restored, and EPA must provide funding in FY2008 to expand the $PM_{2.5}$ monitoring program.

Deep Cuts in $PM_{2.5}$ Monitoring Funding May Impair Attainment and Maintenance of the $PM_{2.5}$ Standards

EPA is now on the verge of promulgating its $PM_{2.5}$ Implementation Rule. It does not follow, however, that the numbers of $PM_{2.5}$ monitors can be sharply reduced simply because attainment and nonattainment designations have been made for the new standard. On the contrary, state and local agencies need data from $PM_{2.5}$ monitors in order to develop control strategies for nonattainment areas. Not only will the proposed funding cuts make it more difficult to devise control strategies by reducing the numbers of $PM_{2.5}$ monitors, but the effect of the $PM_{2.5}$ monitoring cuts will be exacerbated by the recent deep reductions in the $PM_{2.5}$ speciation trends network (STN). The necessity for the speciation network was pointed out by the EPA Office of the Inspector General in a report, titled "EPA Needs to Direct More Attention, Efforts, and Funding to Enhance Its Speciation Monitoring Program for Measuring Fine Particulate Matter," dated February 7, 2005. Yet significant reductions have nonetheless been made.

Moreover, state and local air agencies, and the public that they serve, see a continued need for some level of $PM_{2.5}$ monitoring even in areas that have achieved attainment. There is always the possibility that sources may stop complying with their permits, equipment may malfunction, or unusual natural events or meteorological conditions may occur. In such circumstances, monitored data is vitally necessary for public information and communication. $PM_{2.5}$ is known to harm lung and heart function. States and localities should have considerable leeway to receive STAG funds for retention of monitors that have continued importance to a community; yet they will not if the currently proposed FY2007 budget is enacted.

Further, it is important to recognize that state and local air agency monitoring specialists work with the larger health and science community to understand the long-term effects of particulate pollution on public health. It is simply not wise public policy to erect a network to monitor fine

particles, and then tear it down ten years later when the science and health implications of fine particle pollution are just beginning to be understood.

Finally, we are extremely concerned that the Administrator's proposed cuts in federal funding for monitoring programs is in direct conflict with this regulatory proposal. If the state and local air agencies were able to continue to carry out monitoring of local and regional importance, including adequate $PM_{2.5}$ and other criteria pollutant monitoring, while at the same time adding the new federally proposed requirements, a beneficial outcome for all would be achieved. Yet, this best case scenario is unlikely to be realized.

Rather, the FY2007 budget proposal eliminates funding to support state and local monitoring needs to make way for new federal goals—at the expense of our control strategies, the maintenance of sound public health information, and our productive collaborations with the health effects community. Our comments on the proposed monitoring regulations must be considered against this backdrop.

VIII. Multipollutant Monitoring Should Not Be Undertaken at the Expense of Criteria Pollutant Monitoring Networks

EPA has proposed to require states to operate from one to three National Core (NCore) multipollutant monitoring sites as part of an overall strategy to move from single-pollutant networks to multi-pollutant networks with real-time reporting capability. Although we are pleased that EPA has no plans for FY2007 to supplement the 35 NCore monitors that were sited in FY2006, we are concerned by EPA's proposed NCore requirements. As scientists, we support the acquisition of air monitoring information at precursor, trace gas levels. As administrators of public health programs, however, our congressionally mandated goal is attainment and maintenance of the NAAQS. We are, therefore, concerned that obtaining criteria pollutant information of continuing value, carrying out SIP development work, and other monitoring goals have been, and may continue to be, sacrificed to fund the NCore effort—which cannot be our priority under the Clean Air Act.

The proposed regulations state that requirements for EPA's research grade sites, which would provide complex, research-grade monitoring data for special studies, are not included in the proposed amendments. State and local air agencies appreciate this postponement, we encourage EPA to also reexamine the NCore sites (formerly "NCore Level 2"sites) and reduce, or make more flexible, the requirements for these monitors in the final rule.

Thank you in advance for your time and consideration. If you have any questions or concerns regarding this information, please contact Robert Brown of my staff by telephone at (803) 898-5105 or email at brownrj@dhec.sc.gov.

Respectfully,

Myra C. Reece, Chief
Bureau of Air Quality

cc: Kay Prince, EPA Region 4
Robert Brown, SCDHEC BAQ